

Martinez

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of the Petition of)	
Shell Oil Company for Review of)	
Orders Nos. 75-11 and 76-6)	
(NPDES Permit No. CA0005789))	Order No. WQ 76-12
California Regional Water Quality)	
Control Board, San Francisco Bay)	
Region)	
)	

BY THE BOARD:

Shell Oil Company (petitioner) has submitted a petition to the State Water Resources Control Board (State Board) requesting a review of Orders Nos. 75-11 and 76-6 (NPDES Permit No. CA0005789) adopted by the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Board), on February 18, 1975, and January 20, 1976, respectively. Order No. 76-6 amends Order No. 75-11 and together they prescribe waste discharge requirements for petitioner's Martinez Manufacturing Complex located at Martinez, California.

I. BACKGROUND

Petitioner's Martinez Manufacturing Complex is classified by the Environmental Protection Agency (EPA) as an integrated petroleum refinery (E Subcategory) which manufactures hydrocarbon fuels, lubricants and chemicals. The complex has a crude run capacity of 103,000 barrels per stream day. The principal discharge consists of process wastes, storm water, cooling water blowdown, sewage and tanker ballast water. This waste has an average discharge rate of 5.2 million gallons per day with a maximum discharge rate of 15 million gallons per day. On February 18, 1975, the Regional Board adopted Order No. 75-11 prescribing waste discharge

requirements for petitioner's Martinez Complex. In finding number 7, this Order states "based on guidance received from EPA we hereby find that factors relating to equipment or facilities involved, the processes applied, or other such factors applicable to the discharge are not fundamentally different from those considered in the establishment of the guidelines." The Order applies effluent limitations calculated from appropriate Effluent Limitations Guidelines for Petroleum Refineries adopted by EPA on May 9, 1974.

On May 20, 1975, EPA revised the Effluent Limitations Guidelines for Petroleum Refineries. On January 20, 1976, the Regional Board adopted Order No. 76-6, amending Order No. 75-11, for petitioner's Martinez Complex. Order No. 76-6 revised applicable effluent limitations to reflect the modification in Effluent Limitations Guidelines for Petroleum Refineries (Petroleum Refining Guidelines) established by EPA's May 20, 1975, revision.

II. CONTENTIONS AND FINDINGS

1. Contention: Petitioner contends that Orders Nos. 75-11 and 76-6 limit discharge of pollutants in an unreasonable and arbitrary manner for the following reasons:

(a) The Martinez Complex is a Subpart D (Lube Subcategory) refinery and an organic chemical manufacturing plant with a common effluent treatment facility and a common waste discharge. The Petroleum Refining Guidelines and Orders Nos. 75-11 and 76-6 erroneously classify the Martinez Complex as a Subpart E (Integrated Subcategory) refinery.

(b) The Petroleum Refining Guidelines would permit a Subpart D refinery the same size as Martinez to discharge twice the pollutants that are permitted a Subpart E refinery; a Subpart D refinery and an organic chemical manufacturing plant having the same processes and production as the Martinez Complex would together be permitted to discharge three times the amount of pollutants which petitioner may discharge from its complex; and the Martinez Complex has been unfairly treated relative to other San Francisco Bay area dischargers.^{1/}

(c) The Petroleum Refining Guidelines should be flexible in application. As applied to the Martinez Complex, they are inflexible limitations.

Findings: Section 402 of the Federal Water Pollution Control Act^{2/} requires that NPDES permits meet the requirements established in promulgated guidelines and standards. Further, California Water Code Section 13377 reads as follows:

"Notwithstanding any other provision of this division, the state board or the regional boards shall, as required, or authorized by the Federal Water Pollution Control Act, as amended, issue waste discharge requirements which ensure compliance with any applicable effluent limitations, water quality related effluent limitations, national standards of performance, toxic and pretreatment effluent standards, and any ocean discharge criteria." [Emphasis added.]

^{1/}The comparisons of pollutant emission levels utilized by petitioner were based on the Petroleum Refining Guidelines promulgated by EPA on May 9, 1974. The Petroleum Refining Guidelines issued by EPA on May 20, 1975, permit a Subpart D refinery the same size as Martinez to discharge about 1.1 times the pollutants that are permitted a Subpart E refinery, and a Subpart D refinery and an organic chemical manufacturing plant having the same processes and production as the Martinez Complex would together be permitted to discharge about 1.6 times the amount of pollutants which petitioner may discharge from its complex.

^{2/}U.S.C.A. Section 1342.

The Petroleum Refining Guidelines define an integrated petroleum refinery (E Subcategory) as:

"...any facility which produces petroleum products by the use of topping, cracking, lube oil manufacturing processes, and petrochemical operations, whether or not the facility includes any process in addition to topping, cracking, lube oil manufacturing processes and petrochemical operations."

This definition clearly includes petitioner's Martinez Complex.

Thus, we find that the Martinez Complex is properly classified as an integrated petroleum refinery (E Subcategory), and the Regional Board, without a finding of "fundamental difference", had no alternative under existing laws and regulations other than to impose the limitation contained in Orders Nos. 75-11 and 76-6.

2. Contention: Petitioner contends that Orders Nos. 75-11 and 76-6 should contain provisions governing situations where non-compliance is due to plant upset, breakdown or malfunction of the treatment facility or treatment equipment.

Findings: This same contention was made to the State Board by Union Oil Company of California in its petition for review of Order No. 74-152 of the Regional Board (NPDES Permit No. CA0005053). A thorough analysis of this contention is found in the State Board's Order No. WQ 75-16. The State Board stated, in part, at page 6 of that Order:

"We recognize that influent quality changes, equipment malfunction, facility start up and shut down or other circumstances may sometimes result in the effluent exceeding permit limitations despite the exercise of reasonable care by petitioner. In these cases the petitioner may come forward to demonstrate to the Regional Board that such circumstances exist. The Regional Board will consider these factors in exercising

their discretionary authority in determining non-compliance and for enforcement purposes. Regional Board enforcement actions must be reasonably based pursuant to public hearing and due process protections. Limitless facts and possibilities exist regarding upset conditions and each case must be reviewed on its own merits. To limit this discretion of the Regional Board would be to impair seriously the purpose and enforcement provisions of the Federal Water Pollution Control Act."

The Regional Board is not required to include a provision related to upsets, breakdowns or malfunctions of the treatment facility or treatment equipment in NPDES permits. The Regional Board did not err in adopting the Orders involved without such a provision or allowance.

3. Contention: Petitioner contends that Orders Nos. 75-11 and 76-6 limit discharge of pollutants in a manner which is unreasonable for the following reasons:

(a) The Petroleum Refining Guidelines for a Subpart E refinery do not fit the Martinez Complex because it is unique. The Martinez Complex contains one of the smallest refineries classified in Subpart E, but it is also the most complex. It is penalized for its size, and not given credit for its complexity.

(b) Petitioner is required by statute to meet, by 1977, effluent limitations which require the application of the "best practicable control technology currently available" (BPCTCA). The Development Document on which the Petroleum Refining Guidelines were based calls the Martinez Complex treatment facilities "exemplary. The Martinez Complex already has BPCTCA. However, the application of BPCTCA does not enable the Martinez Complex to achieve the requirements in the Petroleum Refining Guidelines or of the Regional

Board Orders. Therefore, as applied to the Martinez Complex, the Petroleum Refining Guidelines and the Orders require more than BPCTCA, and are accordingly contrary to statute.

(c) The Regional Board Orders require control of discharges which cannot be reasonably achieved, and are unreasonable and arbitrary.

(d) The terms of the Petroleum Refining Guidelines dictate that a variance be granted for the Martinez Complex. The variance provisions require one to show himself "fundamentally different" from "the factors considered in the establishment of the Guidelines." If the Petroleum Refining Guidelines were based upon "factors" at all, the Martinez Complex is and must be fundamentally different from those factors because even with BPCTCA it cannot comply with the Guidelines and because it is in fact unique.

(e) Alternatively, the variance provisions are illusory as applied to the Martinez Complex. They require the petitioner to prove himself "fundamentally different" from the "factors considered in the establishment of the Guidelines." The Development Document on which the Guidelines were purportedly based says that the control technology employed at Martinez was such a "factor" and was, indeed, "exemplary". To the extent the Guidelines were based upon control technology at the Martinez Complex, the variance provisions would require petitioner to prove itself fundamentally different from itself.

Findings: We find that factors relating to the equipment or facilities involved, the process applied, and/or other such factors

related to the petitioner's Martinez Complex are fundamentally different from the factors considered in the establishment of the Petroleum Refining Guidelines in that petitioner's Martinez Complex does have substantially all of the treatment facilities specified by the Development Document as BPCTCA, that those facilities achieve pollutant removal efficiencies comparable to those expected from BPCTCA facilities, and that petitioner still cannot consistently meet limitations based on the Guidelines. A comparison of removal percentages based on the Development Document and data submitted by the petitioner follows:

<u>Constituent</u>	<u>Shell-Martinez</u>	<u>BPCTCA</u>
BOD	96	91
TSS	76	80
COD	78	62
Oil & Grease	93	92
Phenol	99.9	97
NH ₃	79	65

We find no evidence to suggest that the petitioner's treatment facilities are operated at less than optimum efficiency.

Draft EPA regulations^{1/} for implementing variance procedures indicate the criteria to be used when a variance request is made. The draft regulations provide, in part, as follows:

"Generally, the criteria to be used and supported by evidence submitted with a variance request should include the following: (1) whether the raw waste loading for each individual pollutant to be controlled in the discharge under consideration (in terms of mass per unit of production) is significantly different from the raw waste

^{1/}The draft regulations were an attachment to a January 5, 1976, letter from Carl J. Schafer, Acting Director, Permits Division, to Regional Enforcement Directors, Regional Permit Branch Chiefs and NPDES State Directors.

loading considered by the Agency in the development of the applicable limitations; and (2) whether the treatability of the raw waste loadings to levels equal to, less, or more stringent than those prescribed by the applicable limitations is technically feasible with respect to criteria (1) above."

Since these facilities cannot consistently meet the effluent limitations prescribed by the Petroleum Refining Guidelines, we conclude that the raw waste loadings must be significantly different from the raw waste loadings expected by EPA for a facility of this size and complexity. Because of the significantly different raw waste loads, we find that the facilities at the Martinez Complex are fundamentally different from facilities considered by EPA in establishing the effluent limitations for an integrated refinery of the size and complexity of the Martinez Complex. The fact that the Martinez Complex was one of the group of Subpart E refineries examined by EPA is relevant but not conclusive. We find the following effluent limitations to be appropriate:

<u>Constituent</u>	<u>Units</u>	<u>30-Day Average</u>	<u>Maximum Daily</u>
Oil & Grease	lbs/day	1400	2000
	kg/day	635	907
5-day, 20°C BOD	lbs/day	4400	6300
	kg/day	1996	2858
TSS	lbs/day	3500	5500
	kg/day	1588	2495
COD	lbs/day	24,500	35,000
	kg/day	11,113	15,876
Ammonia as N	lbs/day	1600	2600
	kg/day	726	1179

These limitations were derived empirically from effluent data for 1972 through 1975 and represent the same percentile levels within the data as used in the Development Document. Since effluent from the Martinez Complex now meets the limitations in the Regional Board Orders for all other parameters, we find that no adjustment of those other limitations is warranted.

4. Contention: The Regional Board relied upon a determination by EPA, Region IX, that the Martinez Complex was not fundamentally different and did not exercise its independent judgment in this issue.

Findings: The record before us does not substantiate this contention of the petitioner. In any event, the previous findings of this Order render this contention irrelevant.

III. CONCLUSIONS

After review of this matter, and for the reasons heretofore expressed, we conclude that the actions of the Regional Board in adopting Orders Nos. 75-11 and 76-6 were appropriate and proper except that petitioner's Martinez Complex is fundamentally different from the group of Subpart E refineries examined by EPA in development of the Petroleum Refining Guidelines and therefore the modified limitations listed herein for BOD, TSS, COD, Ammonia, and Oil and Grease are appropriate.

IV. ORDER

IT IS HEREBY ORDERED:

1. That the Executive Officer forward to the Administrator of EPA the petition, information, and data submitted by petitioner;

our finding that factors relating to the equipment or facilities involved, the process applied, and/or other such factors related to the petitioner's Martinez Complex are fundamentally different from the factors considered in the establishment of the Petroleum Refining Guidelines; the alternate effluent limits; and the justification for our finding and alternate limits;

2. That the Regional Board make such revisions to its Order No. 76-6 as are necessary to bring it into conformance with the effluent limitations determined to be appropriate by the Administrator of EPA subsequent to his review of our finding of "fundamental difference"; and

3. That petitioner's request for provisions or allowances for upsets, breakdowns, or malfunctions of the treatment facility or treatment equipment is denied.

Dated: **AUG 19 1976**

/s/ John E. Bryson
John E. Bryson, Chairman

/s/ W. Don Maughan
W. Don Maughan, Vice Chairman

/s/ W. W. Adams
W. W. Adams, Member

/s/ Roy E. Dodson
Roy E. Dodson, Member

/s/ Jean Auer
Jean Auer, Member